



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474

T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Cooley, Inc.
50 Esten Avenue
Pawtucket, RI 02860

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Cooley C3, C3FB and C3Plus PVC Single Ply Roof Systems over Recover Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA# 14-0527.06 and consists of pages 1 through 17.
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 16-0322.04
Expiration Date: 08/03/21
Approval Date: 07/21/16
Page 1 of 17

ROOFING SYSTEM APPROVAL

| | |
|---------------------------------|--------------------------------|
| Category: | Roofing |
| Sub-Category: | Single Ply |
| Material: | PVC |
| Deck Type: | Recover |
| Maximum Design Pressure: | See specific system assemblies |

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|---|--|----------------------------------|--|
| Cooley Standard Perimeter Sheet 50-80 mil | Various | ASTM D 4434 | A single ply non-elvaloy membrane perimeter sheet |
| Cooley C-3 40-100 Mil Membrane | 78" x 108" 702 sf. roll | ASTMD 4434 | 40-100 mil thermoplastic alloy membrane field membrane. |
| Cooley C-3 40-100 Mil Perimeter Sheet | 39" x 108' 351 sf. roll | ASTM D 4434 | 40-100 mil thermoplastic alloy membrane perimeter sheet. |
| Cooley C-3 Plus 40-100 Mil Membrane | 78" x 100' 650 ft. ² roll | ASTMD 4434 | 40-100 mil thermoplastic alloy membrane field membrane. |
| Cooley C-3 Plus 40-100 Mil Perimeter Sheet | 39" x 100' 325 ft. ² roll | ASTMD 4434 | 40-100 mil thermoplastic alloy membrane perimeter sheet. |
| Cooley C-3 Reinforced Flashing Membrane | 6", 8", 12", 18" & 24" variable length rolls | ASTM D 4434 | 40-100 mil thermoplastic flashing membrane. |
| Cooley Standard Roofing Reinforced Flashing | Various | ASTM D 4434 | Single Ply PVC flashing material |
| Cooley Standard Roofing Coated Metal | Various | ASTM D 4434 | Single Ply PVC membrane laminated 24 Ga. galvanized steel. |
| Cooley Standard Roofing RAM Flashing | Various | ASTM D 4434 | Single Ply PVC membrane flashing material |
| Cooley Standard Roofing RAM Universal Corners | Various | ASTM D 4434 | Single ply PVC membrane |
| Cooley C-3 Fleece Backed Membrane | Various | ASTM D 4434 | Thermoplastic fleece back membrane |
| Cooley C-3 Coated Metal | 4' x 8' 4' x 10' sheets | US Commercial Standard CS-245-62 | C-3 membrane laminated 24 Ga. galvanized steel. |
| Cooley C-3 Fleece Back RAM | 76" x 100' 39" x 100' 325 ft. ² roll | ASTM D 4434 | Thermoplastic fleece back membrane. Adhered applications. |
| Cooley C-3 Fleece Back RAM Flashing | 12" x 100' 100 ft. ² roll 24" x 100' 200 ft. ² roll | ASTM D 4434 | Thermoplastic fleece back membrane flashing material. |

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:**TABLE 1**

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|--|--------------------------|----------------------------------|---|
| Cooley C-3 Fleece Back RAM Universal Corners | 14" x 14" | ASTM D 4434 | Thermoplastic fleece back membrane. Adhered applications. |
| Cooley C3 Bonding Adhesive | 5 gallon pails | proprietary | Solvent based adhesive for fully adhered RAM systems and C3PLUS roofing membrane. |
| Cooley WB Bonding Adhesive | N/A | proprietary | Water Based adhesive for fully adhered C3PLUS Roofing Membrane. |
| Cooley Coolgrip Walkway | 0.072" x 36" x 60' | proprietary | Walkway pad (roll configuration) |
| Cooley Coolgrip Heavy Duty Walkway | 0.150" x 36" x 60' | proprietary | Walkway pad (roll configuration) |

APPROVED INSULATIONS:**TABLE 2**

| <u>Product Name</u> | <u>Product Description</u> | <u>Manufacturer (With Current NOA)</u> |
|--|--|---|
| ACFoam II, III | Isocyanurate Insulation | Atlas Roofing Corp. |
| Styrofoam | Extruded Polystyrene. | Dow Chemical |
| ISO 95+ GL | Polyisocyanurate foam insulation | Firestone |
| EnergyGuard Perlite | Perlite insulation board. | GAF Materials Corp. |
| Dens Deck, Dens Deck Prime | Silicon treated gypsum | G-P Products |
| High Density Wood Fiberboard | High Density Wood Fiber insulation board. | Generic |
| Perlite Insulation Board | Perlite Insulation | Generic |
| Type X Gypsum, Gypsum | Gypsum Wallboard | Generic |
| EPS or XPS Insulation | Expanded or Extruded Polystyrene. | Generic |
| H-Shield | Isocyanurate Insulation | Hunter Panels |
| ENRGY 3, ENERGY 3, PSI-25 | Isocyanurate Insulation | Johns Manville |
| UltraGuard | | |
| Fesco Foam | Isocyanurate Insulation with perlite facer | Johns Manville |
| DuraFoam | Isocyanurate Insulation with perlite facer | Johns Manville |
| Fesco Board | Rigid perlite roof insulation board. | Johns Manville |
| Ultra-Max, Ultra-Max FA, Thermarroof Composite | Polyisocyanurate foam insulation | Rmax Operating, LLC |
| Structodeck High Density Fiberboard | High Density Wood Fiber insulation board. | Blue Ridge Fiberboard |

APPROVED FASTENERS:

TABLE 3
Product
Description

| Fastener Number | Product Name | Product Description | Dimensions | Manufacturer (With Current NOA) |
|----------------------------|--|--|--------------------------|--|
| 1. | #12 Standard Roofgrip | Insulation and membrane fastener | Various | OMG, Inc |
| 2. | #14 Roofgrip Fasteners | Insulation and membrane fastener | Various | OMG, Inc |
| 3. | ASAP Roofgrip Pre-Assembled System | Insulation and membrane fastener consisting of a steel seam plate and screw. | 2-3/8" plate & #15 Screw | OMG, Inc |
| 4. | OMG Plastic Plate | Plastic plates for fasteners. | 3" round | OMG, Inc |
| 5. | Dekfast Fasteners #14 | Insulation and membrane fastener | Various | SFS Intec, Inc. |
| 6. | Dekfast Galvalume Steel Hex | Galvalume AZ50 stress plate | 2-7/8" x 3-1/4" | SFS Intec, Inc. |
| 7. | Dekfast #15 HS | Insulation and membrane fastener | Various | SFS Intec, Inc |
| 8. | Dekfast Isofast IF-2.375-AT Membrane Plate | Square or oblong Galvalume steel plates for use with #15 HS fasteners | Various | SFS Intec, Inc. |
| 9. | #15 Roof Grip | Insulation and membrane fastener | #15 | OMG, Inc |
| 10. | OMG 2-3/8" Barbed XHD Plate | Galvalume stress plate | 2-3/8" | OMG, Inc |
| 11. | Trufast #15 EHD Fasteners | Insulation and membrane fastener | Various | Altenloh, Brinck & Co. |
| 12. | Trufast 2.4" Barbed Metal Seam Plate | Galvalume stress plate | 2.4" | Altenloh, Brinck & Co. |
| 13. | MaxLoad Fasteners | Insulation and membrane fastener | Various | OMG, Inc |
| 14. | OMG Super XHD | Insulation and membrane fastener | Various | OMG, Inc |
| 15. | OMG 2-3/4" Super XHD Barbed Plate e | Galvalume stress plate | 2.75" | OMG, Inc |
| 16. | #15 Roofgrip | Insulation and membrane fastener | Various | Firestone Building Products |
| 17. | Trufast 3" Metal Insulation Plate | Galvalume stress plate | Various | Firestone Building Products |
| 18. | #12 Standard Stainless Steel | Insulation and membrane fastener | Various | OMG, Inc |
| 19. | Strap Toggle | Insulation and membrane fastener | Various | OMG, Inc |
| 20. | OMG Heavy Duty Fastener | Insulation and membrane fastener | Various | OMG, Inc |
| 21. | Accutrac Fastening System | Insulation and membrane fastener and plate | Various | OMG, Inc |
| 22. | Recessed Metal Palte | | Various | OMG, Inc |
| 23. | ASAP Roofgrip Pre-assembled System | Insulation and membrane system | Various | OMG, Inc |
| 24. | #12 Standard Hex Head | Insulation and membrane fastener | Various | OMG, Inc |
| 25. | Dekfast #12 | Insulation and membrane fastener | Various | SFS Intec, Inc |

| | | | | |
|-----|--|----------------------------------|---------|------------------------|
| 26. | Dekfast #12 Hex | Insulation and membrane fastener | Various | SFS Intec, Inc |
| 27. | Dekfast #15 HS | Insulation and membrane fastener | Various | SFS Intec, Inc. |
| 28. | Dekfast Dekflat Round Plastic Lock Plate | Insulation and membrane Plate | 3" | SFS Intec, Inc. |
| 29. | Dekfast Galvalume 3" Steel Round Plate | Insulation and membrane Plate | 3" | SFS Intec, Inc |
| 30. | Dekfast Galvalume Steel Hex | Insulation and membrane fastener | Various | SFS Intec, Inc |
| 31. | Dekfast Isofast IFC/IW-70x70 | Insulation Plate | Various | SFS Intec, Inc |
| 32. | Dekfast K-Fast | Insulation and membrane fastener | Various | SFS Intec, Inc |
| 33. | Dekfast Recessed Galvalume Steel Hex | Stress Plate | Various | SFS Intec, Inc |
| 34. | Dekfast System ES #12 Plastic | Pre-assembled | Various | SFS Intec, Inc |
| 35. | Dekfast System ES #12 Steel | Pre-assembled | Various | SFS Intec, Inc |
| 36. | Dekfast System ES #14 Plastic | Pre-assembled | Various | SFS Intec, Inc |
| 37. | Tru-Fast #12 DP Fastener | Insulation and membrane fastener | Various | Altenloh, Brinck & Co. |
| 38. | Tru-Fast #12 DP-H Fastener | Insulation and membrane fastener | Various | Altenloh, Brinck & Co. |
| 39. | Tru-Fast #14 HD Fastener | Insulation and membrane fastener | Various | Altenloh, Brinck & Co. |
| 40. | Tru-Fast 3" Metal Insulation Plate | Stress Plate | 3" | Altenloh, Brinck & Co. |
| 41. | CD-10 | Insulation and membrane fastener | Various | OMG, Inc |
| 42. | Fluted Nail | Insulation and membrane fastener | Various | OMG, Inc |
| 43. | Dekfast 15 Belted | Truss head fastener | Various | SFS Intec, Inc |
| 44. | OMG 2" Barbed Plate | Galvanized steel plate | Various | OMG, In |

EVIDENCE SUBMITTED:

| <u>Test Agency/Identifier</u> | <u>Report</u> | <u>Name</u> | <u>Date</u> |
|--------------------------------------|----------------------|--------------------|--------------------|
| Factory Mutual Corp. | 3025170 | 4470 | 02/07/06 |
| | 3021133 | 4470 | 02/07/06 |
| | 3047298 | 4470 | 10/08/13 |
| | J.I. 1R2A0.AM | 4470 | 04/10/90 |
| | J.I. 0T9A3.AM | 4470 | 10/01/90 |
| | J.I. 1V1A8.AM | 4470 | 04/21/92 |
| | J.I. 0X2A9.AM | 4470 | 06/26/93 |
| | J.I. 3W1A1.AM | 4470 | 03/29/93 |
| | J.I. 1W1A9.AM | 4470 | 09/11/93 |
| | J.I. 1X3A6.AM | 4470 | 10/03/93 |
| | J.I. 1W9A2.AM | 4470 | 06/15/93 |
| | J.I. 1W2A0.AM | 4470 | 08/24/93 |
| | J.I. 1T2A6.AM | 4470 | 02/22/93 |
| | J.I. 3W3A4.AM | 4470 | 03/26/93 |
| | J.I. 0X8A9.AM | 4470 | 06/25/93 |
| | J.I. 1X6A5.AM | 4470 | 10/12/93 |
| | J.I. 2W5A6.AM | 4470 | 06/01/93 |
| Underwriters Laboratories, Inc. | File R9834 (N) | UL 790 | 04/06/93 |
| Momentum Technologies, Inc. | NX21J0A | ASTM D 4434 | 06/01/11 |
| | NX21J0B | ASTM D 4434 | 07/20/11 |
| | NX21J0C | ASTM D 4434 | 06/01/11 |

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

| <u>Engineer/Agency</u> | <u>Identifier</u> | <u>Assemblies:</u> | <u>Date</u> |
|-------------------------------|--------------------------|---------------------------|--------------------|
| FM Approval Deck Limitation | RoofNav Listing | D(1), D(2), D(4) | 04/27/16 |

APPROVED ASSEMBLIES

| | |
|--------------------------|---|
| Membrane Type: | Single Ply, PVC |
| Deck Type 7I: | Recover, Insulated |
| Deck Description: | Cementitious wood fiber/gypsum |
| System Type A(1): | Anchor sheet mechanically attached, insulation adhered, membrane adhered. |

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Anchor Sheet: One ply of Miami-Dade Approved ASTM D 4601 membrane secured to the deck with Olympic NTB Magnum fasteners at 1 per 2 sq. ft.

Note: Anchor sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in the applicable Building Code

One or more layers of the Base Layer insulation covered by one layer of the insulation listed as Top Layer.

| <u>Base Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|--|---|
| ACFoam II, Multi-Max FA, ENRGY-3, ENRGY-3 PSI-25, ISO-95+ GL, Minimum 1.4" thick | N/A | N/A |
| <u>Top Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
| High Density Fiberboard Minimum ½" thick | N/A | N/A |

Note: All insulation shall be adhered to the anchor sheet in full moppings of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq. or Cooley C3 Bonding Adhesive at 1 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Membrane: C3 Fleece Back Roof Cover fully adhered to the insulation with Cooley C3 Bonding Adhesive applied at the rate of 1 gal./sq., or approved mopping asphalt applied at the rate of 25 lbs./sq..

Maximum Design Pressure: -45 psf (See General Limitation #9)



NOA No.: 16-0322.04
Expiration Date: 08/03/21
Approval Date: 07/21/16
Page 7 of 17

| | |
|--------------------------|---|
| Membrane Type: | Single Ply, PVC |
| Deck Type 7I: | Recover, Insulated |
| Deck Description: | wood/ min 22 ga. 33ksi steel/concrete/lightweight concrete/cementitious wood fiber/gypsum |
| System Type A(2): | One or more layers of insulation adhered with approved asphalt or adhesive; membrane fully adhered. |

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations.

| <u>Base Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|--|---|
| ACFoam II, Multi-Max FA, E'NRG'Y-3, ENRGY 3 PSI-25, ISO 95 + GL, Minimum 1.4" thick | N/A | N/A |
| <u>Top Insulation Layer (Optional)</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
| High Density Fiberboard Minimum ½" thick | N/A | N/A |

Note: Existing roof surface shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of anchor sheet or base insulation layer. All insulation shall be adhered to the anchor sheet or primed substrate in full moppings of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq. or with ¾" to 1" wide beads of Insta-Stik Adhesive, 12" o.c. (primer not required for use of Insta-Stik). Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with an optional second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

| | |
|---------------------------------|--|
| Vapor Retarder: | (Optional) Any UL or FMRC approved vapor retarder may be installed over the deck or the base layer of insulation. |
| Fire Barrier: | (Optional) 1/2" or 5/8" gypsum or Dens Deck secured to the deck with the insulation. |
| Membrane: | C3 Fleece Back Roof Cover fully adhered to the insulation with Cooley C3 Bonding Adhesive applied at the rate of 1 gal./sq., or approved mopping asphalt applied at the rate of 25 lbs./sq.. |
| Maximum Design Pressure: | -45 psf (See General Limitation #9) |



Membrane Type: Single Ply, PVC
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(1): All layers of insulation simultaneously attached; C3 PLUS membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|--|---|
| ACFoam-II, ACFoam-III Minimum 2" thick | 6, 20, 22, 24, 25, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 | 1: 4 ft² |
| ENRGY 3 PSI 25, ValuTherm Minimum 2" thick | 6, 22, 16, , 17, 25, 27, 28, 29, 31, 32, 33, 34, 35, 36 | 1: 4 ft² |
| ISO 95+ GL Minimum 2" thick | 2, 16, 17, 20, 22, 24, 41, 42 Steel Plate only for OMG | 1: 4 ft² |
| High Density Fiberboard Minimum 1" thick | 2, 16, 17, 20, 24, 41, 42 | 1: 2 ft² |

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Fire Barrier: (Optional) Minimum 1/4" Dens Deck secured to the deck with the insulation.

Membrane: C3 Plus Membrane fully adhered to the insulation with Cooley C3 Bonding Adhesive applied at the rate of 0.83 gal./sq. on both the membrane and the substrate for a total of 1.67 gal./sq., and a heat welded seam minimum 1½" wide at the laps or Cooley WB Bonding Adhesive applied at the rate of 0.67 gal/sq to the substrate.

Maximum Design Pressure: -45 psf (See General Limitation #9)



NOA No.: 16-0322.04
Expiration Date: 08/03/21
Approval Date: 07/21/16
Page 9 of 17

Membrane Type: Single Ply, PVC
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga 33ksi Steel/Wood
System Type C(2): All layers of insulation simultaneously attached; C3 PLUS membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|---|--|
| High Density Fiberboard Minimum 1" thick | 1, 4, 16, 17, 18, 19, 20, 24, | 1: 2 ft ² |

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Fire Barrier: (Optional) Minimum 1/4" Dens Deck secured to the deck with the insulation.

Membrane: C3 Plus Membrane fully adhered to the insulation with Cooley C3 Bonding Adhesive applied at the rate of 0.83 gal./sq. on both the membrane and the substrate for a total of 1.67 gal./sq., and a heat welded seam minimum 1½" wide at the laps or Cooley WB Bonding Adhesive applied at the rate of 0.67 gal/sq to the substrate.

Maximum Design Pressure: -45 psf (See General Limitation #9)



NOA No.: 16-0322.04
Expiration Date: 08/03/21
Approval Date: 07/21/16
Page 10 of 17

Membrane Type: Single Ply, PVC
Deck Type 7I: Recover, Insulated
Deck Description: wood/minimum 22 ga., 33 ksi steel/concrete/cementitious wood fiber/gypsum
System Type C(3): All layers of insulation simultaneously attached; C3 PLUS membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the Base Layer insulation covered by one layer of the insulation listed as Top Layer.

| <u>Base Insulation Layer</u> | <u>Insulation Fasteners</u> (Table 3) | <u>Fastener Density/ft²</u> |
|---|--|--|
| ACFoam II, Multi-Max FA, E'NRG'Y-3, ENRGY 3 PSI-25, ISO-95+ GL, Minimum 1.4" thick | N/A | N/A |

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

| <u>Top Insulation Layer</u> | <u>Insulation Fasteners</u> (Table 3) | <u>Fastener Density/ft²</u> |
|---|--|--|
| ACFoam II, Multi-Max FA Minimum 1.5" thick | 1, 5, 41, | 1:2 ft ² |
| ISO 95 + GL Minimum 1.4" thick | 1, 5, 41, | 1:2 ft ² |
| E'NRG'Y-3, ENRGY 3 PSI-25 Minimum 1.4" thick | 1, 5, 41, | 1:2 ft ² |
| High Density Fiberboard, Minimum ½" thick | 1, 5, 41, | 1:2 ft ² |

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder may be installed over the deck or the base layer of insulation.

Fire Barrier: (Optional) 1/2" or 5/8" gypsum or Dens Deck secured to the deck with the insulation.

Membrane: C3 Fleece Back membrane fully adhered to the insulation with Cooley C3 Bonding Adhesive applied at the rate of 1 gal./sq., or approved mopping asphalt applied at the rate of 25 lbs./sq.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



NOA No.: 16-0322.04
 Expiration Date: 08/03/21
 Approval Date: 07/21/16
 Page 11 of 17

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Wood, Concrete, or 18, 20, or 22 ga thick, 1.5” deep, steel roof deck meeting ASTM A611 Grade E or ASTM A653 Grade 80, secured to structural supports spaced 6 ft o. c. with Teks 4 or Teks 5 fasteners spaced a maximum of 6 in. o. c. at the supports. Deck side laps secured 30 in o. c. with Teks 1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(1): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

| <u>Base or Top Insulation Layer</u> | <u>Insulation Fasteners</u> (Table 3) | <u>Fastener Density/ft²</u> |
|--|--|--|
| EnergyGuard Perlite, FescoBoard, High Density Fiberboard, Structodek, ENRGY-3, ENRGY-3 PSI-25, Ultra-Max, Thermarroof Plus, ACFoam II, ISO 95+ GL, Ultragard, Fesco Foam Minimum 1” thick | N/A | N/A |
| High Density Fiberboard Minimum ½” thick | N/A | N/A |

Note: Total Insulation Layer shall be 1” thick Maximum. All layers of insulation and base sheet shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Fire Barrier: (Optional) Minimum ¼” Dens Deck secured to the deck with the insulation.

Membrane: C3 Plus Membrane attached through the preliminary attached insulation as specified below.



Fastening #1: (*Steel and Wood*) Membrane is mechanically attached using ASAP Roofgrip Pre-Assembled System Trufast 2.4" Barbed Metal Seam Plate and Trufast #15 EHD fasteners; OMG 2-3/8" Barbed XHD Plate and #15 Roofgrip fasteners; spaced 6" o.c. through 5" wide laps spaced in rows 73" apart. The 5" wide laps are then sealed with a minimum 1-1/2" wide heat seal.

Maximum Design Pressure: -60 psf (General Limitation #7)

Fastening #2: (*Concrete*) Membrane is mechanically attached using OMG Heavy Dutyor CD-10 Fasteners and OMG 2-3/8" Barbed XHD Plate OMG 2-3/8" Barbed XHD Plate and #15 Roofgrip fasteners; spaced 6" o.c. through 5" wide laps spaced in rows 73" apart. The 5" wide laps are then sealed with a minimum 1-1/2" wide heat seal.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Wood, Concrete, or 18, 20, or 22ga thick, 1.5” deep, steel roof deck meeting ASTM A1008/A1008M-01a or A653/653M-01a SS Grade 80, steel deck secured to structural supports spaced 6 ft o. c. with Tek 4 or Tek 5 fasteners spaced a maximum of 6 in. o. c. at the supports. Deck side laps secured 30 in o. c. with Tek 1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittal Table.

System Type D(2): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

| <u>Base or Top Insulation Layer</u> | <u>Insulation Fasteners</u> <u>(Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| EnergyGuard Perlite, FescoBoard, Structodek, Pyrox, ENRGY-3, ENRGY-3 PSI-25, Ultra-Max, Thermaroom Plus, ACFoam II, ISO 95+GL, Ultragard, Fesco Foam Minimum 1” thick | N/A | N/A |
| High Density Fiberboard Minimum ½” thick | N/A | N/A |

Note: Total Insulation Layer shall be 1” thick Maximum. All layers of insulation and base sheet shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Fire Barrier: (Optional) Minimum ¼” Dens Deck secured to the deck with the insulation.

Membrane: C3 Plus Membrane attached through the preliminary attached insulation as specified below.

Fastening #1: *(Steel and Wood)* Membrane is mechanically attached using ASAP Roofgrip Pre-Assembled System OMG 2-3/8” Barbed XHD Plate with t Trufast #15 EHD fasteners; Round Barbed Seam Plates with #15 Roofgrip fasteners; spaced 12” o.c. through 5” wide laps spaced in rows 73” apart. The 5” wide laps are then sealed with a minimum 1-1/2” wide heat seal.



Fastening #2: (*Concrete*) Membrane is mechanically attached using OMG Heavy duty or CD-10 Fasteners and OMG 2-3/8" Barbed XHD Plate OMG 2-3/8" Barbed XHD Plate and #15 Roofgrip fasteners; spaced 12" o.c. through 5" wide laps spaced in rows 73" apart. The 5" wide laps are then sealed with a minimum 1-1/2" wide heat seal.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: 18, 20, or 22ga thick, 1.5" deep, steel roof deck meeting ASTM A1008/A1008M-01a or A653/653M-01a SS Grade 80, steel deck secured to structural supports spaced 6 ft o. c. with Teks 4 or Teks 5 fasteners spaced a maximum of 6 in. o. c. at the supports. Deck side laps secured 30 in o. c. with Teks 1 fasteners.

System Type D(3): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

| <u>Base or Top Insulation Layer</u> | <u>Insulation Fasteners</u> (Table 3) | <u>Fastener Density/ft²</u> |
|---|--|--|
| EnergyGuard Perlite, FescoBoard, Structodek, Pyrox, ENRGY-3, ENRGY-3 PSI-25, Ultra-Max, Thermarroof Plus, ACFoam II, ISO 95+GL, Ultragard, Fesco Foam Minimum 1" thick | N/A | N/A |
| High Density Fiberboard Minimum 1/2" thick | N/A | N/A |

Note: Total Insulation Layer shall be 1" thick Maximum. All layers of insulation and base sheet shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Fire Barrier: (Optional) Minimum 1/4" Dens Deck secured to the deck with the insulation.

Membrane: C3 Plus Membrane attached through the preliminary attached insulation as specified below.

Fastening #1: *(Steel)* Membrane is mechanically attached using Dekfast Isofast IF 2.375-AT membrane Plates with Dekfast #15 HS or Dekfast 15 Belted Fasteners spaced 6" o.c. through 6" wide laps spaced in rows 66" apart. The 6" wide laps are then sealed with a minimum 1 1/2" wide heat seal.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



RECOVER SYSTEM LIMITATIONS:

- 1 Existing roof surfaces used as a bonding substrate shall be tested for uplift resistance, in compliance with Testing Application Standard TAS 124 to the calculated design pressures of the field, perimeter and corner areas, determined in compliance with the Florida Building Code requirements.
- 2 All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE